

FURTHER NOTES ON THE TURBELLARIAN FAUNA OF THE  
ATLANTIC COAST OF THE UNITED STATES

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Since my previous publications on the larger Turbellaria of the Atlantic coast of the United States (Hyman, 1939a, 1940, 1944), very little in the way of new material has come to hand. Undoubtedly much remains to be done on the smaller Turbellaria of the region in question—acoels, rhabdocoels, and alloecoels—but one may assume that our knowledge of the larger forms, especially polyclads, is practically complete. Florida remains the only region from which additional species may be expected. The present paper aims to put on record some new material and information and to call attention to necessary nomenclatorial changes. As the classificatory position and familial and generic definitions for the following forms were given in the publications cited it appears unnecessary to repeat them here.

Order Polycladida

Family Plehniidae

*Plehnia ellipsoides* (Girard), 1854, new combination

*Discocelides ellipsoides* Hyman, 1940

In connection with the finding of a new species of *Plehnia* on the Californian coast I am giving some discussion of the family Plehniidae and its genera that leads me to the desirability of transferring *Leptoplana ellipsoides* Girard, which I determined some years ago as a member of the Plehniidae, to the genus *Plehnia*. I now feel that it fits better in this genus than in *Discocelides* to which I previously assigned it.

Family Cryptocelidae

*Phaenocelis purpurea* (Schmarda), 1859

*Comprostatum insularis* Hyman, 1944

At the time of my description of this cryptocelid from the Florida keys, I considered it a new species representative of a new genus for which I created the name *Comprostatum*. Dr. Stephen Prudhoe of the British Museum (Natural History) kindly called my attention to the genus *Phaenocelis* Stummer-Traunfels, 1933. Stummer-Traunfels in 1933 re-investigated the types of Schmarda (1859) and determined that Schmarda's species *Leptoplana purpurea* from Jamaica is in fact a cryptocelid to which he gave the generic name *Phaenocelis*. There can be no doubt that my genus *Comprostatum* is identical with *Phaenocelis* and after some hesitation I am also now of the opinion that my species is identical with that of Schmarda. Hence the name *Comprostatum insularis* becomes a synonym of *Phaenocelis purpurea*.

## Family Leptoplanidae

*Zygantriplana angusta* (Verrill), 1892, new combination

*Stylochoplana angusta* Hyman, 1939

In re-investigating from the original material *Leptoplana angusta* Verrill, 1892, now known to be native to the southern part of the Atlantic coast, I tentatively placed it in the genus *Stylochoplana* while recognizing some lack of conformity with this genus. Dr. Ernesto Marcus of the University of São Paulo, Brazil, kindly called my attention to the genus *Zygantriplana* Laidlaw, 1906, which I had unfortunately overlooked. Verrill's species fits perfectly into this genus and hence its name becomes *Zygantriplana angusta*. It is interesting to note that a species of *Zygantriplana*, so similar to *angusta* that it should probably be regarded as a geographic variant of the latter, is very common on the Brazilian coast near São Paulo (Correa, 1949). This would seem to be the first instance of a similarity in the Turbellarian fauna between Florida and Brazil.

## Family Pseudoceridae

The genus *Thysanozoon* in Florida

The genus *Thysanozoon* is probably the easiest of all polyclad genera to recognize since the clothing of the dorsal surface with numerous, closely placed, conspicuous papillae is, by definition, diagnostic of the genus. By the same token, the species of the genus are particularly difficult to differentiate because of a general similarity of internal structure. Color becomes of considerable importance in differentiating the species and this is lost in preserved specimens. In 1851 Girard described under the name *Thysanozoon nigrum* a single specimen of a black *Thysanozoon* that he had taken on the eastern coast of Florida. Verrill (1901) recorded what appears to be Girard's species from Bermuda and during a stay at Bermuda in 1935, I also took two specimens alive (Hyman, 1939b). The Bermuda specimens were a rich velvety black throughout the dorsal surface with some small white flecks. Sections of the copulatory apparatus showed distinctive characters. *T. nigrum* was not again taken on the Florida coast, however, until 1950 when Dr. Harold Humm, in charge of the Florida State University marine station at Alligator Harbor near Tallahassee, kindly sent me a living *Thysanozoon* from that locality, collected February 4. This was 40 mm. long, of an oblong shape when crawling extended, and of a general dark grayish black, with white flecks on the margins and papillae. The animal was fortunately sexually mature and sections showed it to be identical with the Bermuda specimens. *Thysanozoon nigrum* therefore occurs both on the Florida coast and at Bermuda. It is a valid species distinguishable by the uniform black color of both dorsal surface and papillae, by the paired male apparatuses, by certain details of the male apparatus described in my Bermuda article, and by the presence of an intestinal branch in each papilla. Stummer-Traunfels (1895) in a review of the genus *Thysanozoon* pointed out that part of the species have but one male apparatus and that the occurrence of an intestinal branch in each papilla was known only for the type species, *T. brochii*. Marcus (1949) in reviewing the valid species of the genus records 9 with single and 15 with double male apparatus but does not mention the question of the pres-

ence of an intestinal branch in the papillae except with regard to his new species in which such branches are wanting.

There is another Floridan species of *Thysanozoon* besides *nigrum*. Pearse (1938) records taking no less than 29 specimens of a *Thysanozoon* in Crooked Island Sound and St. Joseph's Bay, localities in the same general part of Florida as Alligator Harbor. Pearse identified these specimens as *T. brochii* but described only the color which varied from cream to brown and purple with brown and purplish papillae. A whole mount of one of these specimens has come into my possession but as it appears immature (length 20 mm.) has not been sectioned. The extension of an intestinal branch into each papilla is clearly seen upon the whole mount, which thus does resemble *brochii* in this respect. What seems to be a specimen of the same species has been received for identification from the United States National Museum. This was collected by F. M. Bayer, January 26, 1951, under stones along the County Causeway, Biscayne Bay, Florida, which lies along the southern end of the eastern coast. This specimen also unfortunately proved sexually immature but in the cleared worm the intestinal network sending a branch into each papilla was evident. The specimen was accompanied by a color description which stated that the animal was purplish maroon with brown papillae and some white spots along the edge and on the papillae. There would seem little doubt that this specimen is identical with those of Pearse but whether they can be regarded as *T. brochii* remains uncertain.

Still another preserved specimen was received from the Florida State University, collected in November, 1938, at Clearwater, Florida, located at about the middle of the western coast of the peninsula. This specimen had been bleached white by the preservative and was also immature so that it proved of no value. Whether the intestinal branches extend into the papillae could not be determined.<sup>1</sup>

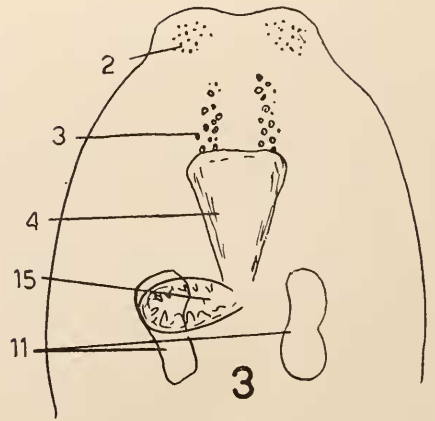
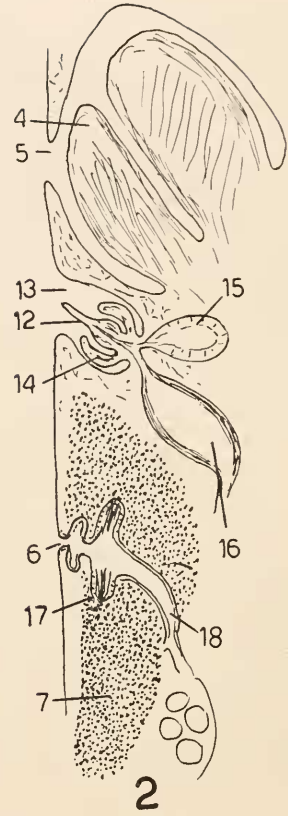
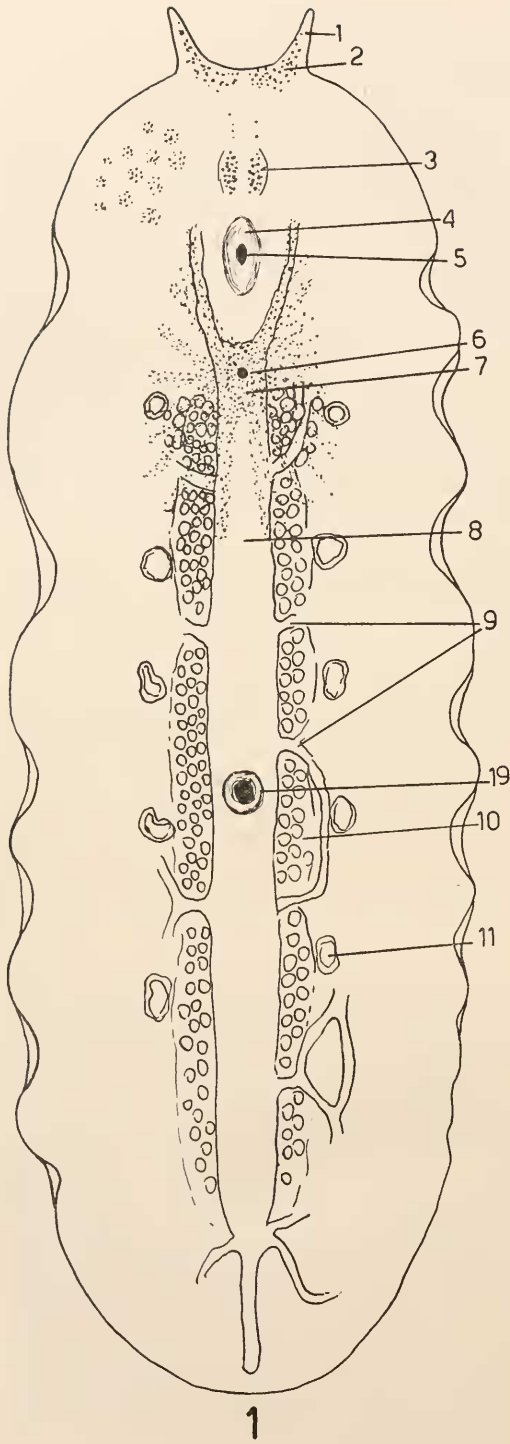
#### Family Euryleptidae

*Prostheceraeus maculosus* (Verrill), 1892, new combination

*Eurylepta maculosa* Verrill, 1892

In previous comments on this species I remarked that some good specimens were necessary before its systematic position could be determined with certainty. Apparently the species had not been refound since Verrill's publication. Therefore I was very pleased to be informed by Dr. Chauncey Goodchild of the staff of Invertebrate Zoology at Woods Hole that he had found the species in some abundance on wharf pilings at Lagoon Pond Bridge, Martha's Vineyard. On August 2, 1949, Dr. Goodchild kindly brought me a number of live specimens from that locality and also very generously took the trouble to fix a number of them for me. The living animal (Fig. 1) is about 10 mm. long when moving extended, and of an oblong or elongated oval shape with two pointed tentacles at the anterior margin. It sails along rapidly over the seaweeds by undulating the body margins after the usual

<sup>1</sup> Since the above was sent to press there has been received from the U. S. National Museum a vial of polyclads collected in the Biscayne Bay region of Florida by F. M. Bayer. This vial contains another specimen of *Thysanozoon nigrum*, and two specimens of *Pseudoceros crozieri* Hyman, 1939, hitherto known only from Bermuda and thus furnishing a second case of a polyclad common to Bermuda and Florida; further two specimens of the *Accrotisa* mentioned above, clearly an undescribed species, and an undescribed leptoplanid.



FIGURES 1-3

manner of cotylean polyclads. The color is light tan dotted with dark brown spots. Numerous eyes are present along each tentacle and on the body margin between the tentacle bases; there is also a pair of cerebral eye clusters over the brain region. Examination of pressed live specimens showed at once that the intestinal branches are anastomosed into a network and this puts the species in the genus *Prosthecceraeus*. Several specimens were sectioned and these also show the characters of *Prosthecceraeus*. Some details from these sections have been added to Figure 1. The main intestine forks anteriorly around the pharynx and behind this gives off irregularly several branches on each side that anastomose into a network. Along either side of the main intestine is seen an elongated tubular uterus stuffed with eggs and this gives off laterally uterine vesicles. In a specimen sectioned frontally five of these vesicles were seen on each side alternating with the main intestinal branches as characteristic of the genus. The sucker is situated at about the body middle. A sagittal view of the male and female copulatory apparatus is shown in Figure 2 but offers nothing particularly distinctive. It is unfortunate for systematic purposes that the copulatory apparatuses are very similar throughout the Cotylea, a fact that adds to the difficulties of specific identification in this group. A whole mount of the species has been deposited in the American Museum of Natural History.

#### The genus *Acerotisa* on the Atlantic coast

In 1940 I described *Acerotisa baiac* from a single specimen collected by Pearse in St. Joseph's Bay, Florida. I have here to record the unexpected finding of a specimen of this species by Dr. Chauncey Goodchild at Lagoon Pond Bridge, Martha's Vineyard, August 13, 1948. Alive the specimen was egg-shaped with pointed anterior end and of a translucent white color with the dorsal surface dotted with cream-colored dots. One may also expect to find from Woods Hole southward in the floating *Sargassum* the minute species *Acerotisa notulata* (Bosc) 1801, of which I gave a description in my article on *Sargassum Turbellaria* (Hyman, 1939b). Still another *Acerotisa* species occurs on the Atlantic coast of the United States. I am again indebted to Dr. Harold Humm for sending a living specimen of an *Acerotisa* obviously different from the foregoing species. This was collected April 16, 1951, at Alligator Harbor, Florida. Unfortunately it arrived partly disintegrated; what remained is shown in Figure 3. The numerous eyes in both the marginal and cerebral clusters clearly differentiate the animal from any other *Acerotisa* species known from the Atlantic coast or Gulf of Mexico. The animal was white peppered with dark dots. The animal bears a striking resemblance to *Acerotisa piscatoria* Marcus 1947, collected near São Paulo, Brazil, but the identity cannot be established without further material.

FIGURE 1. *Prosthecceraeus maculosus*, from life, some details added from sections.

FIGURE 2. Median sagittal section of pharyngeal region of *Prosthecceraeus maculosus*, showing male and female copulatory apparatus.

FIGURE 3. Anterior part of an undescribed species of *Acerotisa* from the Gulf coast of Florida, from life.

1, tentacles; 2, tentacular eyes; 3, cerebral eyes; 4, pharynx; 5, mouth; 6, female gonopore; 7, cement glands around female canal; 8, main intestine; 9, intestinal branches; 10, uterus; 11, uterine vesicles; 12, penis papilla; 13, male gonopore; 14, penis sheath; 15, prostatic vesicle; 16, seminal vesicle; 17, cement pouch of female canal; 18, vagina; 19, sucker.



## Order Tricladida

Note on *Probursa veneris*

In 1944, I described the interesting marine triclad, *Probursa veneris*, found sheltering in empty *Venus* shells on a sand bar near the western end of the Atlantic shore of Long Island. It was therefore very surprising to receive a number of live specimens of this worm from Dr. Harold Humm, who had found them in Bogue Sound, near Beaufort, North Carolina, June 20, 1946, on the fronds of a red alga, *Mitophyllum medium*. Not only the adults but also many young and spherical orange capsules were present on the alga. Alive the worms were translucent white, very active and restless, swimming by a twittering motion, and crawling in leechlike fashion by alternately attaching the body ends, that must be provided with adhesive glands.

I wish here to thank Dr. Harold Humm and Dr. Chauncey Goodchild for the constant interest they have shown in my specialty and for their generous expenditure of time and trouble in furnishing me with turbellarian specimens.

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